Fuligo septica, *Leocarpus fragilis*, *Diderma testaceum*, *Didymium nigripes* var. *xanthopus*, *Enteridium Rozeanum*, *Lycogala epidendrum*, *Trichia persimilis*, *Hemitrichia clavata*, *Hemitrichia vesparium*, and *Arcyria denudata*. Some species such as *Craterium leucocephalum*, *Mucilago spongiosa*, and *Dictydium cancellatum* while not ubiquitous, when found are present in large amounts, while on the contrary a few species such as *Reticularia lycoperdon* and *Dictydiaethalium plumbeum* although fairly common are not found in any great quantity where they do occur.

As a result of the writer's collections it seems clear that eastern Massachusetts is not especially outstanding with regard to its myxomycetous flora, but does yield rather varied and interesting collections if worked intensively, for the eighty-nine species and varieties mentioned in this paper represent nearly one fourth of the total number of species and varieties of *Myxomycetes* known to science. It seems probable that the extent of the foregoing list is the result, not of any special abundance of *Myxomycetes* in eastern Massachusetts but rather of the particularly intensive collecting that was done. Undoubtedly also, this list could be considerably augmented by collecting in the same area another year, for *Myxomycetes*, unlike most fungi, do not necessarily appear in the same vicinity season after season but often are found only at more or less rare intervals.

LABORATORIES OF CRYPTOGAMIC BOTANY, Harvard University,
Cambridge, Mass.

CONTRIBUTION TO THE FLORA OF THE ISLANDS OF ST. PIERRE ET MIQUELON.

BRO. LOUIS ARSÈNE.

(*Continued from p.* 158.)

*CHENOPODIUM ALBUM L.—Introduced in gardens and fields; C. Miquelon Village, August 16, 1900.

Bonnet and Delamare report the related species, *Chenopodium opulifolium* Schrader, which is perhaps only a variety of *Ch. album*.

Delamare says CHENOPODIUM RUBRUM is also introduced as a weed in gardens; I did not meet with it there. But it grows in the salt marshes near the Grand Barachois of Miquelon, where it certainly is native.

ATRIPLEX PATULA L.—A weed in gardens and fields; C. Town of St. Pierre, September 29, 1902. Introduced from Europe.

A. latifolia Wahl. is reported by Delamare for this plant or a form of the next.

ATRIPLEX PATULA L., var. HASTATA (L.) Gray.—Introduced in cultivated ground; C. Town of St. Pierre, September 20, 1902.

Reported by Bonnet and Delamare under the name *A. hastata* L. Prof. Fernald writes: "This is certainly not a species, differing from *A. patula* only in a tendency to hastate leaves, but in no other character."

*ATRIPLEX GLABRIUSCULA Edmonston.—Saline soil; common on maritime sands and shingle banks where it is always spreading; the leaves are mealy and the stem often reddish. Its general appearance is very different from that of the preceding species to which it has been connected by some authors. Surely native. Borders of the Grand Etang de Miquelon, August 14, 1900.

*SALSOLA KALI L.—Maritime sands; R. Sea-shore near Miquelon Bridge, July 30, 1901.

I never found any species of *Suaeda* or *Salicornia*, but very likely some of these fleshy saline plants are native in St. Pierre et Miquelon.

Bonnet reports *Lepigonum salinum* Fr. and *Lepigonum medium* Fr. (*Spergularia salina* Presl. and *Spergularia media* (L.) Presl.) on the evidence of De La Pylaie whose specimens, for both species, were collected near the Barachois (or port) of St. Pierre. I collected SPERGULARIA SALINA in a salt marsh near the Grand Etang of Miquelon (August 16, 1900), and also in De La Pylaie's locality in St. Pierre, but I never saw *Spergularia media*. Prof. Fernald thinks the last plant might have been mistaken for *S. canadensis*, "which is rather common in southern Newfoundland."

*SPERGULA ARVENSIS L.—Introduced from Europe and naturalized in cultivated ground and waste places; C. Farm at Pointe au Cheval, Miquelon, August 12, 1900.

SAGINA NODOSA (L.) Fenzl.—Wet sandy or gravelly places; R. in Miquelon; not found in St. Pierre. Isthmus of Langlade: sandy hollows of the dunes near the Grand Barachois, south of Grande Miquelon, August 16, 1902.

Reported only by Gautier.

ARENARIA PEPLOIDES L., var. ROBUSTA Fernald, RHODORA, xi. 114 (1909).—Maritime sands and shingle, where it covers large areas, but does not blossom much; C. in Miquelon; R. in St. Pierre. Isthmus of Langlade, July 19, 1901.

Reported by Bonnet under the name of *Honkenya peploides* Ehrh. It is astonishing that Delamare did not see this plant which is well established on the sands of the Baie de Miquelon, where he lived for years.

*STELLARIA GRAMINEA L.—Cultivated ground; introduced from Europe; C. Farm near Savoyard, St. Pierre, July 14, 1900.

SILENE ACAULIS L., var. EXSCAPA (All.) DC. See Fernald & St. John, RHODORA, xxiii. 269 (1921).—Rocky plains and hills; C. in Miquelon. Cap Blanc of Miquelon, July 29, 1901.

Named *S. acaulis* L. by Delamare.

MONTIA LAMPROSPERMA Cham.—Moist places; R. Grand Colombier (an islet near Anse à Henry, St. Pierre), July 10, 1900.

Named *M. fontana* L. by Bonnet.

NYMPHOZANTHUS VARIEGATUS (Engelm.) Fernald, RHODORA, xxi. 187 (1919).—Still water, ponds and pools; CC. Etang de la Vigie, St. Pierre, August 16, 1901.

Named *Nymphaea advena* Ait. by Bonnet and Delamare, and *Nuphar luteum* Sm. by Gautier.

RANUNCULUS FLAMMULA L.—Damp places; R.; not found in St. Pierre. Native. Belle Rivière Valley, July 16, 1901.

Reported by Gautier, not by Bonnet and Delamare.

RANUNCULUS REPTANS L., var. FILIFORMIS (Michx.) Hooker.—This plant reported by Gautier, Bonnet and Delamare, is common in damp places, especially on the sandy or gravelly borders of ponds; Etang du Fauteuil, St. Pierre, July 1, 1900. But I found in Langlade (Belle Rivière, wet sands, July 14, 1902) a form which has leaves a little wider, not strictly filiform, and seems to be near the type *R. reptans* L. This form is rather rare.

RANUNCULUS REPENS L.—Low ground, borders of brooks; C. Very likely native: is found far from dwelling places. Cap à l'Aigle, St. Pierre, July 5, 1900.

Reported only by Gautier.

THALICTRUM DIOICUM L.—Rocky and shady places; grassy plains, woods; C. Anse à Ravenel, Saint Pierre, July 20, 1900. Professor Fernald writes: "Very interesting; the only evidence from east of Nova Scotia."

Collected by De La Pylaie; not seen by Gautier and Delamare.

*FUMARIA OFFICINALIS L.—Naturalized from Europe in the vicinity of dwelling places and cultivated ground; R. On rubbish, Town of St. Pierre, August 26, 1901.

COCHLEARIA CYCLOCARPA Blake, RHODORA, xvi. 135 (1914).—Maritime rocks and sandy beaches; not common. Cap Blanc of Miquelon, July 29, 1901; Anse à Dinant, St. Pierre, July 6, 1902.

Named *C. officinalis* L. by Delamare, *C. officinalis*, var. *maritima* Gr. & Godr. by Bonnet, and probably *C. anglica* L. by Gautier.

Gautier reports two distinct species of *Cochlearia*. With *C. anglica*, he gives also *C. danica* L. I did not find it. As it is native in Arctic America, its presence in St. Pierre et Miquelon is not impossible. It may be also that it was confused with another species, for instance *C. tridactylites* Banks, which abounds on the western coast of Newfoundland.

CAKILE EDENTULA (Bigel.) Hooker.—Sandy or gravelly sea-shore; C. Anse à Ravenel, Saint Pierre, August 2, 1900.

Named by Delamare *C. maritima* Scop., and by Bonnet *C. maritima*, var. *americana* Torrey.

*RAPHANUS RAPHANISTRUM L.—Naturalized in cultivated ground, waste places, etc.; C. Road from the Town of St. Pierre to Cap à l'Aigle, August 20, 1901.

*BRASSICA ARVENSIS (L.) Kuntze.—As the preceding, but rarer. Town of St. Pierre, July 10, 1902.

*BRASSICA NIGRA (L.) Koch.—As the two preceding species; R. Town of St. Pierre, July 10, 1902.

Gautier records "la moutarde" without any designation of species.

*SISYMBRIUM OFFICINALE (L.) Scop.—Waste places, roadsides; not common and perhaps not yet naturalized. Road from the Town of St. Pierre to the Phare de Galantry, July 16, 1901.

*CARDAMINE PENSYLVANICA Muhl.—Low ground, wet meadows, borders of streams; R.; not found in St. Pierre. Belle Rivière Valley, June 21, 1902.

De La Pylaie, Gautier and Delamare observed, as I did, *Drosera rotundifolia* L. and *D. intermedia* Hayne, which grow in great quantity, chiefly the first, in the bogs of the Archipelago. But Gautier records also *D. oblongifolia* L. Perhaps he means *D. anglica* Huds. which grows in Newfoundland, but which I did not see in the French Islands. Perhaps also he gives that name to the hybrid between *D. rotundifolia* and *D. intermedia* which is sometimes to be found in bogs when the two plants are intermixed.

*MITELLA NUDA L.—Damp shady woods, growing in moss; not C.; not found in St. Pierre. Belle Rivière Valley, Langlade, June 21, 1902.

RIBES HIRTELLUM Michx.—Rocky places, damp woods; R. Pointe Blanche, St. Pierre, June 20, 1901.

Named by Bonnet and Delamare *R. oxyacanthoides* L., a different plant confused, for a long time, with *Ribes hirtellum*. See RHODORA, xiii. 148 (1911).

SPIRAEA LATIFOLIA (Ait.) Borkh., var. SEPTENTRIONALIS Fernald, RHODORA, xix. 255 (1917).—Low rocky or gravelly ground, bogs, borders of woods; C. Near the road from Cap à l'Aigle to Anse à Henry, St. Pierre, August 3, 1899.

Named by Delamare *S. salicifolia* L., and by Bonnet *S. salicifolia*, var. *latifolia* Ait. Confused by Gautier with *S. corymbosa* Raf.

PYRUS ARBUTIFOLIA L. f., var. ATROPURPUREA (Britt.) Robinson.—Swamps and low ground; CC. Sept Etangs, St. Pierre, July 19, 1900.

It is very likely this plant that Delamare calls *P. arbutifolia*, var. *melanocarpa* Willd. and Bonnet *P. arbutifolia* L. f. (the type). Delamare says *P. arbutifolia*, var. *melanocarpa* is common in Miquelon, and Bonnet, in recording the type, takes care to cite Delamare and gives exactly the same localities as he (Chapeau de Miquelon and Terres Grasses): therefore it cannot be denied that they mean the same plant, and I am convinced that it is neither *Pyrus melancarpa* (Michx.) Willd. nor *P. arbutifolia* L. f. (the type), but the var. *atropurpurea* of the last species.

Gautier records distinctly *two different plants;* here are his words: "Le *Pyrus arbutifolia* DC. (*Crataegus pyrifolia* Lam.) dont les fleurs en corymbe, aux pédicelles et au calice tomenteux, ont beaucoup d'analogie avec celles de l'aubépine, et le *P. melanocarpa* Willd. sont de tout petits arbrisseaux qui rampent sur le sol." But his summary description of the first is good for the var. *atropurpurea;* as for the second, which is very common in the vicinity of Montreal, but does not seem to be common in Newfoundland, I think Gautier gives its name to *Amelanchier Bartramiana* Tausch., whose fruits are dark purple or nearly black, and whose pedicels and calyx are glabrate as in *P. melanocarpa.* Gautier does not even mention *Amelanchier Bartramiana.* I think it is prudent not to include *P. melanocarpa* in the list of St. Pierre et Miquelon plants.

PYRUS DUMOSA (Greene) Fernald, RHODORA, xxiii. 275 (1921).—Damp rocky plains and hillsides; banks of streams, woods; C. Anse à Dinant, St. Pierre, July 19, 1900.

Named *Pyrus americana* DC. by Gautier, Bonnet and Delamare. It was also the name given to it by Dr. Small, of the New York Botanical Garden, in 1907, when I sent specimens to that Institution. In a letter dated March 23, 1926, Dr. Small states that the Miquelon plant was placed since then under *Sorbus decora* Schneider; it is the equivalent of *Pyrus dumosa.*

*PYRUS **Arsenii** (Britton), n. comb. = PYRUS DUMOSA × ARBUTI-

FOLIA, var. ATROPURPUREA. *Sorbus Arsenii* Britton in Arsène, Rep. Bot. Exch. Cl. Brit. Isl. vii. 961 (1926).—Plant found at the foot of Chapeau de Miquelon, July 25, 1902.

Intermediate between *P. dumosa* and *P. arbutifolia,* var. *atropurpurea* and most likely a natural hybrid of the two species, which, in the locality cited, grow not far from each other. It resembles *Pyrus fennica* Bab. and *P. intermedia* Ehrh., native in northern Europe, and also *P. spuria* DC. of garden origin, which is supposed to be a hybrid between *P. aucuparia* (L.) Ehrh. and *P. melanocarpa* (Michx.) Willd.

Its leaves are usually, in their inferior part, either pinnate with 1–3 pairs of completely free leaflets, or subpinnate with decurrent leaflets and lobes less and less cut as they go from the base of the leaf; in their superior part, they are simply dentate or lobate-dentate with lobes decreasing as they approach the extremity of the leaf. There are leaves that have an odd leaflet as is often the case in *Pyrus spuria;* sometimes the small, superior leaves of branchlets are quite entire and resemble those of *P. arbutifolia,* var. *atropurpurea.* The floral cymes are much smaller than in *P. dumosa* and about the same size or a little larger than in *P. arbutifolia,* var. *atropurpurea,* but the pedicels and calyx are not so tomentose as in the last named plant. Fructification unknown.

I had no time to determine whether the plant is found in other localities, and I could not study it scientifically, particularly with regard to the variations it may assume and its fructification. It would be interesting to know if it is sterile or not.

On July 19, 1903, after my departure from St. Pierre et Miquelon, I found the same plant at Chaleur Bay, fifty miles north of Miquelon, on the southern coast of Newfoundland. There were two or three individuals in full bloom, but I could not ascertain if the supposed parents grew in the vicinity.

Pyrus dumosa is a shrub reaching, at St. Pierre et Miquelon 2 or 3 metres; *P. arbutifolia,* var. *atropurpurea* is a very small shrub, usually prostrate, and when erect not exceeding 40 centimetres. The hybrid, such as I saw it, either in Miquelon or in Newfoundland, was not quite 2 metres high.[1]

*AMELANCHIER LAEVIS Wiegand, RHODORA, xiv. 155 (1912).—

[1] I published in the *Report for 1925 of the Botanical Society of the British Isles* a little account of this hybrid, but I gave as one of the supposed parents *P. americana* instead of *P. dumosa.* (Rep. Bot. Soc. Vol. vii. page 961.)

Open rocky ground, dry or damp; C.; often growing with *A. Bartramiana*, but blossoming a week or two earlier. Sept Etangs, St. Pierre, July 5, 1900.

AMELANCHIER BARTRAMIANA (Tausch) Roem.—Same habitat as the preceding, sometimes in swamps; C. Sept Etangs, July 5, 1900.

Bonnet and Delamare report it under the name of *A. canadensis*, var. *oligocarpa* Torr. & Gr.; but they were unaware of the existence of *A. laevis*, which is just as common.

FRAGARIA VIRGINIANA Duchesne, var. TERRAE-NOVAE (Rydb.) Fernald & Wiegand.—Sandy or rocky places; CC. in Miquelon; rather rare in St. Pierre. Cap Noir, St. Pierre, June 28, 1902.

Named *Fragaria virginiana* by Bonnet, and *F. canadensis* Michx. by Delamare. Gautier writes: "Le fraisier est inconnu à St. Pierre," which is hardly a correct statement.

*GEUM MACROPHYLLUM Willd.—Damp woods, borders of streams, ravines; R.; not found in St. Pierre. Ruisseau de l'Anse aux Soldats, July 18, 1901.

RUBUS IDAEUS L., var. CANADENSIS Richardson. See Fernald, RHODORA, xxi. 245 (1919).—Rocky places, woods and thickets; C. Bois Brûlé, near Etang du Télégraphe, St. Pierre, July 18, 1900.

This plant is called *Rubus idaeus* by Gautier and Delamare, and *Rubus strigosus* Michx. by Bonnet. In an additional note to his "Florule," Delamare replaces *R. idaeus* by *R. strigosus*, a correction very likely suggested by Bonnet who, in his own work, places Delamare's specimens from Miquelon under *R. strigosus*.

Rubus idaeus L., var. *strigosus* (Michx.) Max., is abundant in southern Newfoundland; perhaps it grows also in St. Pierre et Miquelon with var. *canadensis* found by me.

RUBUS RECURVICAULIS Blanchard.—Damp places, borders of woods, ravines; C. Ruisseau du Renard, Miquelon, August 13, 1900; Ruisseau du Goéland, St. Pierre, July 10, 1902. "The common Blackberry of all southern Newfoundland." (Prof. Fernald.)

Very likely the plant named *R. canadensis* L. by Bonnet and Delamare.

*ALCHEMILLA ALPINA L.—Rocky places, usually dry; R.; not found in St. Pierre. Belle Rivière Valley, July 16, 1901.

I do not repeat what I have already said of this plant. As it is native in Greenland, there is a likelihood of its occurence in Newfoundland, Labrador and the Gaspé Peninsula.

Gautier records *Rosa pimpinellifolia* L. This plant of the heaths and maritime sands of Europe could exist in Miquelon only as an

introduction. But as Gautier does not record any other *Rosa*, one may suppose he mistook for it *Rosa nitida* Willd. which, as well as *R. carolina* L., is common in the Islands; all the more as the very densely spinous stems of *R. nitida* give it some likeness to *R. pimpinellifolia*, a variety of which, common in the sands of Jersey, has also roseate flowers. I do not leave *R. pimpinellifolia* in the list of St. Pierre et Miquelon plants.

PRUNUS VIRGINIANA L.—Rocky places; borders of streams; R.; not found in St. Pierre. Belle Rivière Valley, September 21, 1900, and June 21, 1902.

Named *P. serotina* Ehrh. by Bonnet and Delamare. *P. pensylvanica* L. f. is much more frequent; it is found in the same localities as *Amelanchier Bartramiana* and *laevis*.

*TRIFOLIUM HYBRIDUM L.—Introduced from Europe in cultivated ground, but rare and perhaps not yet naturalized. Village of Miquelon, July 22, 1902.

*VICIA ANGUSTIFOLIA Roth., var. SEGETALIS (Thuill.) Koch.—Introduced from Europe and naturalized; C. Roadside near Anse à Ravenel, St. Pierre, August 29, 1901.

*VICIA HIRSUTA (L.) Koch.—Introduced in cultivated ground, but rarer than *V. tetrasperma* (L.) Moench. Meadow in the Village of Miquelon, July 31, 1902.

LATHYRUS PALUSTRIS L., var. PILOSUS (Cham.) Ledeb.—Damp places, sandy or marshy borders of ponds and streams; C. Sand dunes south of Pointe au Cheval, Miquelon, July 19, 1901.

Named *L. palustris* L. by Bonnet and Delamare.

*LATHYRUS PALUSTRIS L., var. RETUSUS Fernald & St. John. See St. John: Sable Island, p. 81.—Peaty or sandy marshes; R. in Miquelon; not found in St. Pierre. Pousse-Trou, Miquelon, August 13, 1900.

Near var. *myrtifolius* (Muhl.) Gray under which it was first placed at the New York Botanical Garden; distinguished from it by having the leaflets broadest near the tip. Reported from Sable Island by Dr. St. John.

*OXALIS MONTANA Raf. See Fernald, RHODORA, xxii. 143 (1920).—Damp, shady woods; R.; not found in Grande Miquelon and St. Pierre. Woods of Anse aux Soldats, Langlade, August 16, 1902.

*EUPHORBIA HELIOSCOPIA L.—Naturalized from Europe in cultivated ground; just as common as *E. peplus* L. reported by Gautier and Delamare. Garden in the Town of Saint Pierre, September 19, 1901.

EMPETRUM EAMESII Fernald & Wiegand, RHODORA, xv. 215 (1913).—Rocky barrens, dry exposed slopes and summits of hills, CC. Sept Etangs, May 7, 1903.

Red-fruited plant quite distinct from *E. nigrum* L. with which it very often grows. Gautier and Delamare name it *E. rubrum* Vahl., and Bonnet, who records only *E. nigrum* L., following in this American authors of his time, includes under this last species *E. rubrum* La Pylaie.

The leaves of *E. Eamesii* are smaller and more crowded than those of *E. nigrum;* its stem and branchlets are weaker, and its annual shoots shorter. It reaches the highest points, and takes hold on the denuded rocks, struggling desperately against lichens which, very often, succeed in covering its shoots with their foliaceous expansions.

It is not rare to see the two species forming extensive carpets with their branches intermingled in such a way that it is impossible to separate them. However they never hybridize; in spite of a diligent search, during several years of field experience, I never found any intermediates between them.

ILEX VERTICILLATA (L.) A. Gray, var. TENUIFOLIA Wats.—Damp woods, low ground; R.; not so frequent as *Nemopanthus mucronata.* Belle Rivière Valley, Langlade, July 18, 1901.

Named by Bonnet *Prinos verticillatus* L. Prof. Henri Lecomte, of the Paris Museum, was kind enough to communicate to me De La Pylaie's specimens collected in St. Pierre, and on which Bonnet's identification was based; they belong to var. *tenuifolia* and differ in no way from those I collected in Langlade. But *the type,* which is common in Nova Scotia and has been found in the dunes of Sable Island and in southern Newfoundland may also grow in St. Pierre et Miquelon.

*IMPATIENS BIFLORA Walt.—Damp, low ground, shady woods; not C. Savoyard, St. Pierre, September 1, 1902.

*HYPERICUM CANADENSE L.—Damp sandy or peaty soil; CC. Plain of Savoyard, St. Pierre, August 26, 1901.

HUDSONIA ERICOIDES L.—Cliffs and maritime rocks; dry, sandy or rocky soil; not C. Heights near Anse à Henry, St. Pierre, July 5, 1900. Associated with *Empetrum nigrum* and *Eamesii, Silene acaulis,* var. *exscapa* and *Diapensia lapponica.*

Named *H. tomentosa* Nuttall by Bonnet and Delamare, and *H. montana* Nutt. by Gautier.

VIOLA PALLENS (Banks) Brainerd.—Marshy places, along streams; damp woods; CC. Near Etang du Pain de Sucre, St. Pierre, June 3, 1900.

Named *V. blanda* Willd. by Delamare.

VIOLA LABRADORICA Schrank.—Damp open or shady places; CC. Pain de Sucre, St. Pierre, June 3, 1900.

Named *V. Muhlenbergii* Torr. by Bonnet and Delamare. It is likely that the plant reported by Gautier as *V. canina* L. is *V. labradorica.*

In regard to *Viola palustris* L. recorded by Gautier, Prof. Fernald writes: "I very much doubt the identification, since the only evidence we yet have of the species in Newfoundland is from the Straits of Belle Isle; and southwest of there, it is a strictly alpine plant."

EPILOBIUM ANGUSTIFOLIUM L., var. MACROPHYLLUM (Haussk.) Fernald, RHODORA, XX. 4 (1918).—Low ground, clearings of woods; abundant in new burnt places; C. Woods of the Belle Rivière Valley, August 2, 1901.

Named *E. spicatum* Lam. by Gautier, Bonnet and Delamare.

*EPILOBIUM PALUSTRE L., var. MONTICOLA Hausskn.—Bogs, wet banks and borders of streams; in the same stations as the type and just as common. Cap Blanc, Miquelon, August 14, 1900; Belle Rivière, Langlade, August 2, 1901.

EPILOBIUM GLANDULOSUM Lehm.—Damp, rocky or peaty places; R. Low ground, north of the Town of St. Pierre, August 3, 1901; Terres Grasses, Miquelon, August 29, 1900.

Bonnet and Delamare report *E. tetragonum* L. in the last-named locality: Terres Grasses of Miquelon. This plant has not been observed in America, but by many early collectors was confused with *E. glandulosum.* Gautier reports also *E. tetragonum.*

ŒNOTHERA MURICATA L.—Sandy or gravelly banks and slopes near the sea; R. Rocky landslips of Belle Rivière, Langlade, August 2, 1901.

Bonnet reports *O. biennis* L., meaning, very likely, the preceding species. Gautier mentions "des *Œnothera,*" but does not name any species.

*ŒNOTHERA PUMILA L.—Dry rocky ground; open woods; R. Belle Rivière Valley, Langlade, July 16, 1901.

*SANICULA MARILANDICA L., var. BOREALIS Fernald, RHODORA, XXVIII. 220 (1926).—Woods and grassy borders of streams; R.; not found in St. Pierre. Belle Rivière Valley, Langlade, July 16, 1901. This variety in the only *Sanicula* found in Gaspé and Newfoundland.

ÆTHUSA CYNAPIUM L.—Waste places; introduced from Europe and naturalized; not C. Garden in the Town of St. Pierre, August 30, 1901. Reported only by Gautier.

COELOPLEURUM LUCIDUM (L.) Fernald, RHODORA, XXI. 146 (1919.)—Cliffs and maritime rocks; damp places near the sea; C.; grows very

often with *Ligusticum scothicum* L. Ruisseau du Renard, on the sea-coast, Miquelon, Aug. 21, 1900.

Named *Archangelica Gmelini* DC. by Gautier, Bonnet and Delamare.

Delamare says that Gautier records *Angelica atropurpurea* L., but the latter mentions only "l'Angélique" without any clear designation of species. The name "Angélique" is just as good for *Ligusticum scothicum* which he does not record and which is generally called "Angélique de mer" by the French sailors of Newfoundland. It seems impossible to maintain *Angelica atropurpurea* in the list of St. Pierre et Miquelon plants, although it is native in Newfoundland.

*Cornus alternifolia L. f.—Moist woods; R.; not found in St. Pierre, where *C. stolonifera* Michx. is common. Belle Rivière Valley, Langlade, July 17, 1901.

Some forms of *Cornus canadensis* L. are near var. *intermedia* Farr. with two small opposite leaves in the middle of the stem, as may be seen in my specimen from Anse à Henry, St. Pierre, July 19, 1900. But I do not remember having seen, in St. Pierre et Miquelon, plants in which these cauline leaves were 1/2 or 2/3 as large as the upper leaves, as is often the case along the St. Lawrence River, in the vicinity of Trois-Rivières and Québec. Generally, when they exist at all, these intermediate leaves are much smaller; 1/4 to 1/6 the size of the upper leaves.

*Pyrola rotundifolia L., var. arenaria Mert. & Koch. See Fernald, Rhodora, xxii. 122 (1920).—Open woods, in damp places; same habitat as *Pyrola minor* L. but rarer; not found in Grande Miquelon and in St. Pierre. Anse à Ross woods, Langlade, July 17, 1901.

Monotropa uniflora L.—Deep woods, under evergreens; C. in Langlade; R. elsewhere. Belle Rivière Valley, August 24, 1900.

This plant is ignored by Bonnet and Delamare. The latter forgets to mention the fact that Gautier records it. He even writes a short description of the plant, but, as usual, does not give any locality.

Andromeda glaucophylla Link.—Bogs; CC. Sept Etangs, St. Pierre, June 6, 1901.

Named *A. polifolia* L. by Gautier, Bonnet and Delamare.

*Epigaea repens L.—Sandy or rocky woods, under evergreens; R.; found only in Langlade. Wood near Tête Pelée, August 16, 1902.

Gaylussaccia dumosa (Andr.) T. & G., var. Bigeloviana Fernald, Rhodora, xiii. 99 (1911).—Sphagnous bogs, with *Kalmia* and *Andromeda*, but not so common. Plain between Anse à Ross and Anse aux

Soldats, Langlade, August 16, 1902. Plant with leaves glandular on both faces. This is perhaps the reason why Bonnet places it under var. *hirtella* Gray, which is essentially a southern form, ranging from Virginia to Florida.

VACCINIUM PENSYLVANICUM Lam., var. ANGUSTIFOLIUM (Ait.) Gray.—Dry plains and hillsides, or peaty barrens; CC. Anse à Pierre, St. Pierre, July 5, 1900.

Named by Bonnet *V. pensylvanicum* Lam.

Gautier records *V. Myrtillus* L., a plant which undoubtedly does not grow in St. Pierre et Miquelon, and he says it is more common than the other species of the same genus. We may suppose that he mistook it for *V. pensylvanicum*, var. *angustifolium;* for another variety of this species was called *V. myrtilloides* by Michaux.

Gautier records also *V. corymbosum* L., never seen by any other observer in the Islands, but which is known in Nova Scotia in several forms.

VACCINIUM ULIGINOSUM L., var. ALPINUM Bigel. See Fernald, RHODORA, XXV. 24 (1923).—High plains and barrens, summits of hills, CC. all over the Islands. Sept Etangs, St. Pierre, July 9, 1900.

Named *V. uliginosum* L. by Gautier, Bonnet and Delamare:

VACCINIUM VITIS-IDAEA L., var. MINUS Lodd.—Dry rocky places, sometimes in peaty bogs, CC. Sept Etangs, St. Pierre, July 5, 1900.

Named *V. Vitis-Idaea* by Gautier, Bonnet and Delamare.

*PRIMULA VERIS L.—Dry grassy places; RR. Plain near Etang du Pain de Sucre, St. Pierre, July 5, 1899.

This is the only locality where I found this European plant. Its claim to be native is very doubtful. Prof. Fernald writes: "*Primula veris* has been reported as established at several scattered spots in America. In 1884 Macoun (Cat. Can. Pl. pt. 2, page 310) reported it as well established in a meadow near North Sydney, Cape Breton, and also in meadows on Vancouver Island. In 1885 Britton & Hollick (Bull. Torr. Bot. Cl. xii. 39) reported it as occurring on a roadside on Long Island, New York. In 1917 it was found by Weatherby at Salisbury, Connecticut, and when he recorded it (RHODORA, xxii. 143) he also noted its occurrence at Greene, Maine. In 1922 it was reported (RHODORA, xxiv. page 233) as also established at Braintree, Massachusetts."

BARTONIA VIRGINICA (L.) B.S.P.—Sphagnous bogs; R.; growing sometimes with *Schizaea pusilla*. Peaty bog on the hillside northwest of the Town of St. Pierre, near the road to Anse à Pierre, August 26, 1901. Professor Fernald writes: "*Bartonia virginica* is particularly

interesting, since this is the first evidence of its occurrence east of Nova Scotia. It is quite unlike the plant of Newfoundland."

This is very likely the plant listed by Bonnet under the name of *Bartonia verna* Muhl.

I did not find either *Bartonia paniculata*, var. *sabulonensis* of Sable Island, or *Bartonia paniculata*, var. *iodandra* of Newfoundland. Further searches might lead to the discovery in St. Pierre et Miquelon of these two varieties.

Gautier records "*Gentiana detonsa* Fries, petite plante gazonnante aux feuilles réunies en rosette radicale." I do not know to which American plant he refers; neither De La Pylaie, nor Delamare nor I have ever found a *Gentiana* in St. Pierre et Miquelon. *G. nesophila* Holm is very near *G. detonsa* and earlier American botanists so called it. It is found on Anticosti and in western Newfoundland. *G. Amarella* (*G. acuta*) and *G. propinqua* are native in Labrador and western Newfoundland.

CONVOLVULUS SEPIUM L., var. PUBESCENS (Gray) Fernald.—Maritime sands and shingle; C. Savoyard, St. Pierre, September 2, 1901. Grows abundantly on sand dunes with *Ammophila breviligulata* and *Elymus arenarius*, var. *villosus*.

Named *C. sepium*, var. *americanum* Sims. by Bonnet; Delamare did not see this plant.

*MYOSOTIS ARVENSIS Lam.—Dry places; fields and roadsides; R. Waste land near Le Calvaire, St. Pierre, August 26, 1901. Doubtfully native.

SCUTELLARIA EPILOBIIFOLIA A. Hamilton. See Fernald, RHODORA, xxiii. 86 (1921).—Maritime sands and shingle, in damp places; borders of ponds near the sea; C. Etang de Savoyard, St. Pierre, August 29, 1901.

Named by Bonnet *S. galericulata* L. Though *S. epilobiifolia* is found in America, as is the case for *S. galericulata* in Europe, in marshy ground and along streams, I saw it, in the French Islands, only in the habitat mentioned.

*GLECOMA HEDERACEA L.—Wet open or shady places; introduced from Europe and found only near dwelling-houses or in cultivated ground; R. Route de Savoyard, St. Pierre, July 14, 1900.

PRUNELLA VULGARIS L., var. LANCEOLATA (Barton) Fernald, RHODORA, xv. 183 (1913).—Dry or damp places, in meadows, woods, hillsides and cliffs; CC. Anse à Dinant, St. Pierre, October 3, 1900.

Named *Prunella vulgaris* L. by Gautier, Bonnet and Delamare. The American variety is surely native in St. Pierre et Miquelon,

but it may be that the European plant (the type) has been introduced in cultivated ground.

LYCOPUS UNIFLORUS Michx., var. OVATUS Fernald & St. John. See St. John, Sable Island, p. 92.—Moist soil; C. Plain near Savoyard, St. Pierre, August 29, 1901.

Named *Lycopus virginicus* L. by Gautier, Bonnet, and Delamare.

*MENTHA ARVENSIS L.—Wet places; low ground at the base of hills, borders of streams; not C. Savoyard, St. Pierre, August 29, 1901.

MENTHA ARVENSIS L., var. CANADENSIS (L.) Briquet.—Low ground; waste places, fields and gardens; R. Town of St. Pierre, August 30, 1901.

Very likely the plant named by Bonnet *Mentha canadensis* L., var. *glabrata* Benth.

Gautier says that, in St. Pierre et Miquelon, "on trouve quelques espèces du genre *Mentha* qui restent cantonnées dans l'enceinte des jardins." This is not the case for *Mentha arvensis* which is found in the interior of the Islands; very likely *Mentha arvensis*, var. *canadensis*, though found in fields and gardens, is also native.

*VERONICA SCUTELLATA L.—Swamps and wet places; R.; not found in St. Pierre. Belle Rivière Valley, July 25, 1901.

*VERONICA OFFICINALIS L.—Dry, heathy ground; plains and hillsides, clearings of woods; not C. Plain along the road from the Town of St. Pierre to Savoyard, July 14, 1900.

*VERONICA SERPYLLIFOLIA L.—Damp open or shady ground; grassy plains; C. Anse à Pierre, St. Pierre, June 14, 1900.

*VERONICA ARVENSIS L.—Introduced from Europe and naturalized in cultivated ground; C. Anse à Ravenel, St. Pierre, August 17, 1901.

*VERONICA AGRESTIS L.—As the preceding; C. Waste ground near Le Calvaire, St. Pierre, August 17, 1901.

It is astonishing that Bonnet and Delamare do not mention a single species of this genus which is well represented in the Islands. Gautier writes: "On trouve plusieurs véroniques et l'euphraise," without giving specific names.

*MELAMPYRUM LINEARE Lam.—Dry woods; R. Belle Rivière Valley, Langlade, August 2, 1901.

EUPHRASIA AMERICANA Wettst.—Wet open ground; grassy plains and hillsides; CC. Route de Savoyard, St. Pierre, July 14, 1900.

Named *E. officinalis* L. by Bonnet and Delamare.

UTRICULARIA VULGARIS L., var. AMERICANA Gray.—Ponds and quiet streams; R. Pool in the plain near Le Chapeau de Miquelon, July 30, 1901.

Named by Gautier *U. vulgaris* L.

*UTRICULARIA MINOR L.—Shallow ponds and pools; C. Plain near Le Chapeau de Miquelon, July 30, 1901. Not found in flower.

*OROBANCHE TERRAE-NOVAE Fernald, RHODORA, xxiii. 235 (1927).—Damp woods; R. Wood near Tête Pelée, Langlade, August 16, 1902.

PLANTAGO JUNCOIDES Lam., var. DECIPIENS (Barnéoud) Fernald, RHODORA, xxvii. 100 (1925).—Maritime rocks, cliffs; CC. Anse à Pierre, St. Pierre, July 19, 1900.

Named *P. maritima* L. by Gautier, Bonnet and Delamare.

GALIUM PALUSTRE L.—Damp shady places; grassy borders of streams; R.; not found in St. Pierre. Anse aux Soldats, Langlade, August 2, 1901.

Perhaps the plant named by Gautier *G. uliginosum* L., a European species not yet found in America. It may be also that Gautier gives that name to *G. labradoricum* which is common in St. Pierre.

*GALIUM CLAYTONI Michx.—Wet ground, swamps; C. Belle Rivière Valley, Langlade, August 24, 1900.

I leave in the general list of St. Pierre et Miquelon plants *Galium trifidum* L., recorded by Bonnet and not found by me. But it is possible that this plant was confused with *G. Claytoni*, which, 25 years ago, grew in the very same locality given in Bonnet's "Florule" or not far from it: bogs near Etang Boulo, at the western end of the harbour of St. Pierre. De La Pylaie's locality as given by Bonnet is: "autour de l'étang qui est au fond du port."

*GALIUM LABRADORICUM Wiegand.—Damp ground, particularly in sphagnous bogs; C. Anse à Dinant, St. Pierre, June 27, 1901.

*HOUSTONIA **Faxonorum** (Pease & Moore) Fernald, n. comb. *H. caerulea*, var. *Faxonorum* Pease & Moore, RHODORA, ix. 210 (1907). *H. serpyllifolia* Grah. in Bot. Mag. lv. t. 2822 (1828), not Michx. Fl. Bor.-Am. i. 85 (1803).

Damp open ground; borders of streams; R. Anse à Ravenel, St. Pierre, June 3, 1900.

Of this material, Professor Fernald writes:

"Your plants are identical with the abundant specimens from the alpine region of the White Mountains of New Hampshire and are the first authentic specimens known except from the Mt. Washington area. In the Gray Herbarium there is a single collection of it labelled in the handwriting of Asa Gray: 'Plymouth, Mass., in sand, 1861. *H. caerulea*, var. leg. *Rothrock*.' No recent collections from Massachusetts or elsewhere in southern New England are comparable with this one, and the question naturally arises, whether the Rothrock

specimens actually came from Plymouth or whether there was some confusion of data.

"*Houstonia Faxonorum* was treated by Pease & Moore as a variety of *H. caerulea* L., and the difference they emphasized was merely that of the corolla. The plant is, however, of stiffer habit and so much more fleshy that every one of the 127 plants or clumps of it preserved in the Gray Herbarium and the herbarium of the New England Botanical Club has dried very dark; while well prepared specimens of the frailer and less fleshy *H. caerulea* retain a greenish aspect. In *H. caerulea* the cauline leaves and bracts tend to become reduced and narrow; in *H. Faxonorum* they are less reduced and mostly oblong to elliptic or oval. In *H. caerulea* the mature capsules are 2.5–4 (rarely 4.5) mm. broad and the peduncles are only slightly dilated beneath the delicately ribbed to ribless fruiting calyx; in *H. Faxonorum* the capsules are 3.5–5.5 mm. broad and the peduncles are strongly dilated beneath the prominently ribbed fruiting calyx. All these characters are merely matters of degree and to some extent they overlap; but the most important characters occur in the seeds. In *H. caerulea* the perfectly ripe seeds range from 400–650 μ in diameter, with the central depression 150–250 μ across; but in *H. Faxonorum* the seeds run consistently larger, 750–1000 μ in diameter with the depression 300–500 μ across.

"This seed difference added to all the others and coupled with the occurrence of *Houstonia Faxonorum* as a strictly alpine plant in New England (the reputed station at Plymouth being open to serious doubt) and otherwise only far to the northeast of the limit of *H. caerulea*, indicates that it is better to treat it as a boreal species rather than as a variety of *H. caerulea.*"

LONICERA VILLOSA (Michx.) Roem. & Schultes. See Fernald, RHODORA, xxvii. 5 (1925). Damp peaty or rocky ground; CC. Plain near the Phare de Galantry, St. Pierre, June 6, 1901.

Named *Lonicrea caerulea* L. by Bonnet and *L. caerulea canadensis* Lam. by Delamare.

Gautier records two species of *Lonicera: L. villosa* Muhl. and *L. velutina* DC. These two names are very likely synonymous, but he certainly means two distinct plants, for he points out that the fruit of the former is red, and that of the latter, black. Very likely his second name applies to the preceding plant (*L. villosa*, var. *typica*), and his first one to the following which is treated as only a variety,

but whose general appearance is quite different. The *red* fruit was probably immature.

LONICERA VILLOSA (Michx.) Roem & Schultes, var. CALVESCENS (Fern. & Wieg.) Fernald, RHODORA, xxvii. 8 (1925).—Damp places, swamps; R. Ruisseau du Renard, Miquelon, July 16, 1902 (Specimens lost) and Belle Rivière, near Les Fourches, Langlade, June 1, 1903.

LINNAEA BOREALIS L., var. AMERICANA (Forbes) Rehder.—Wet shady places, in woods and thickets; CC. Champ de tir, St. Pierre, July 14, 1900.

Named *L. borealis* L. by Gautier, Bonnet and Delamare.

VIBURNUM CASSINOIDES L.—Damp rocky woods and swamps; C. La Vigie, St. Pierre, August 2, 1900; Belle Rivière, Langlade, August 2, 1901.

This plant, which has also been reported by Gautier, Bonnet and Delamare, is extremely variable in outline of leaf and general luxuriance. I collected in Langlade (Belle Rivière Valley, August 24, 1900), specimens of a particularly vigorous form blooming a little later than the common plant. At the New York Botanical Garden it was named *V. nudum* L., and considered as specifically distinct. But Professor Fernald writes he can get no specific distinction between this more luxuriant specimen (collected on August 24, 1900) and the two others.

CAMPANULA ROTUNDIFOLIA L.—Dry or damp places; meadows, sand dunes, cliffs and landslips along the coast; CC. Anse à Pierre, St. Pierre, July 19, 1900; Cap de Miquelon, August 11, 1900. Presenting many variations according to its *habitat.*

Reported by Bonnet and Delamare. Gautier reports only *C. pusilla* G. (not Haenke as Delamare writes in his Florule), which he describes as a "campanule à feuilles radicales longuement pétiolées." We may suppose that he means the dwarf and rigid form of *C. rotundifolia* found in exposed situations and which is the most common in the Islands (*C. dubia* DC.).

I found at Ruisseau du Renard, Miquelon, on August 13, 1900, a white-flowered *Campanula* which Dr. Small, of the N. Y. Botanical Garden, named *C. Giesekiana* Vest. Of this material, Professor Fernald writes: "I am quite unable to get anything like a specific difference between *C. Giesekiana* and the other variations of *C. rotundifolia.* Even Witasek, who has split the species much finer than anyone is able to follow, treats *G. Giesekiana* merely as a sub-

species of *C. rotundifolia*, and until the American variations of the series can be properly studied it is rather unwise to treat the plant as a species, or anything more than one of the many forms."

SOLIDAGO MACROPHYLLA Pursh.—Rocky places and woods; C.; R. in St. Pierre. Pousse-Trou, Miquelon, August 20, 1900.

Named *S. squarrosa* Muhl. by Bonnet and Delamare.

SOLIDAGO UNILIGULATA (DC.) Porter.—Bogs; sometimes in rocky and dry places; CC. Mirande, Miquelon, July 30, 1901.

Named *S. terrae-novae* T. & G. by Bonnet and Delamare. Professor Fernald writes: "So far as I can make out, *S. terrae-novae* is but an unimportant form of *S. uniligulata.*"

Gautier records only one *Solidago: S. canadensis* L. which he says to be very common and which has, however, never been seen by any other botanist. Very likely he gives that name to *S. uniligulata* which is the most abundant species of the genus and reaches the summits of hills where its height does not exceed sometimes a few inches.

*SOLIDAGO RUGOSA Mill., var. VILLOSA (Pursh) Fernald.—Dry rocky places; R. Plain near Savoyard, St. Pierre, August 29, 1901.

ASTER UMBELLATUS Mill.—Damp places; woods and borders of streams; C. in Miquelon; R. in St. Pierre. Ruisseau de la Carcasse, Miquelon, August 29, 1900.

Named by Bonnet and Delamare *A. umbellatus*, var. *latifolius* Gray. Professor Fernald writes: "The Miquelon plant is fairly typical; it is certainly not var. *latifolius.*"

I exclude from the St. Pierre et Miquelon flora *Aster tripolium* L., recorded by Gautier. It seems unlikely that this European plant of brackish beaches and bogs exists at all in the Islands, even as an introduction. He does not mention any other *Aster*, being satisfied with pointing out that there are others with a single head and belonging to species near *A. alpinum*. There is not much precision in this!

ERIGERON CANADENSIS L.—Waste places; R. Perhaps introduced from the American continent. Town of Saint Pierre, August 29, 1904.

Reported only by Gautier.

ANAPHALIS MARGARITACEA (L.) Benth. & Hook., var. SUBALPINA Gray.—Sand dunes and gravelly banks; dried sandy or rocky bottoms of streams; C. Belle Rivière, September 12, 1901.

Named *A. margaritacea* B. & H. by Bonnet.

*ACHILLEA BOREALIS Bong.—Damp rocky places; cliffs and maritime rocks; C. Native. Savoyard, St. Pierre, August 2, 1900.

ACHILLEA MILLEFOLIUM L. is introduced as a weed in cultivated ground. Gautier, Bonnet and Delamare report only this plant; they do not mention *A. borealis*.

CARDUUS NUTANS L.—Introduced from Europe; R. Town of St. Pierre, September 20, 1902.

Reported only by Gautier.

*CENTAUREA NIGRA L.—Introduced from Europe and thoroughly naturalized in cultivated ground, roadsides and waste places; C. Farm at Savoyard, St. Pierre, August 18, 1901.

*CICHORIUM INTYBUS L.—Introduced from Europe, but rare and casual. Roadside near the Town of St. Pierre, August 16, 1901.

HYPOCHAERIS RADICATA L.—Introduced weed; R. Farm at Savoyard, St. Pierre, August 18, 1901.

Reported only by Gautier.

SONCHUS ARVENSIS L.—Introduced in cultivated ground and naturalized, but far less common than *S. oleraceus* and *asper*. Garden in the Town of Saint Pierre, August 29, 1901.

Reported only by Gautier.

PRENANTHES TRIFOLIOLATA (Cass.) Fernald.—Rocky plains and hillsides; grassy borders of streams; woods and thickets; C. Cap de Miquelon, August 11, 1900.

Named *Prenanthes alba* L. by Bonnet and Delamare, and *Nabalus serpentarius* DC. by Gautier.

(*To be continued*)

THE AMERICAN CARDAMINE PARVIFLORA.

M. L. FERNALD

IN recent American literature *Cardamine parviflora* L. finds a regular place, with no suggestion that it is not quite identical with the Eurasian plant. Examination of the Eurasian and American series, however, brings out certain tendencies which are so constant as to indicate that the American plant is at least a good geographic variety. In fact Dr. O. E. Schulz in his *Monographie der Gattung Cardamine* has well brought out the distinctive characters, here repeated, with slight alterations suggested by more abundant American material:

In typical *C. parviflora* of Eurasia the leaflets of the basal rosettes